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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/560,893

12/16/2005

Luca Boiero

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EXAMINER

NGUYEN, NGA X

ART UNIT

PAPER NUMBER

3662

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/560,893	<b>Applicant(s)</b> BOIERO ET AL.	
	<b>Examiner</b> NGA X. NGUYEN	<b>Art Unit</b> 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 41-80 is/are pending in the application.
- 4a) Of the above claim(s) 67-78 and 80 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 44-47, 49-53, 58-60 and 62-66 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 41-43, 48, 54-57, 61 and 79 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/16/2005 &amp; 5/9/2006</u>                                 | 6) <input type="checkbox"/> Other: _____                          |

***Election/Restrictions***

1. Applicant's election without traverse of claims 41-66 & 79 are drawn to "Method and Apparatus of determining the location of a mobile terminal" in the reply filed on 12/03/2007 is acknowledged. Claims 67-78 & 80 are drawn to "A Terminal Device" are canceled.

***Drawings Objection***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the processing module in claim 55, base stations in claim 43 & 57 and adjacent base stations in claim 45 & 58 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 41-43, 48, 54-57, 61 & 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nir (2003/0224802) in view of Eckel (2005/0272447).

With regard to claim 41, 55 & 79, Nir discloses:

- The mobile terminal both in a satellite-based positioning system and in a cellular communication system, whereby the mobile terminal is adapted to receive satellite signals from the satellite based system and to be covered by at least one cell of the cellular communication system (see page 2, paragraph 16-20)
- Determining at least approximately the coordinates of the mobile terminal based on both satellite signals from the satellite based system and information related to the cellular communications system (see page 2-3, paragraph 21-25).

Nir does not teach the altitude coordinate which is related to the cellular communication (base station).

Eckel discloses:

- Determining at least approximately the coordinates of the mobile terminal based on both satellite signals from the satellite based system and information related to the cellular communications system, wherein the coordinated include an altitude coordinate and an estimate of the altitude coordinate derived from the information related to the cellular communications system (see page 4-5, paragraph 89-92).

It would have been obvious to modify Nir by incorporating the teaching of Eckel's system that the cellular communication system having altitude coordinate so as the mobile terminal is enable to perform position information with 3D that based on GPS (two dimension) and an altitude that related to cellular network.

With regard to claim 42 & 56, Nir teaches:

- Providing a geographical data base comprising data base items associated with a given set of bi-dimensional positioning coordinates of the mobile terminal in the area corresponding to values for the altitude coordinate (see page 2, paragraph 21-25).
- Accessing the geographical data base via the mobile terminal whereby the positioning coordinates, as at least approximately determined by the mobile terminal based on the satellite signals (see page 2, paragraph 23).

With regard to claim 43 & 57, Eckel teaches:

- Identifying, in the cellular communications system, at least one base station proximate to the mobile terminal, the proximate base station having an associated altitude coordinate and using the altitude coordinate of the proximate

base station as the estimate of the altitude coordinate (see page 5, paragraph 92).

With regard to claim 48 & 61, Eckel teaches:

- Providing an approximate bi-dimensional positioning of the terminal on the basis of the information related to the cellular communications system (see page 4-5, paragraph 89).

Nir teaches:

- Determining the positioning coordinates of the mobile terminal on the basis of the satellite signals by exploiting the two-dimensional positioning and the estimate of the altitude coordinate (see page 2, paragraph 20).

With regard to claim 54, Nir teaches determining at least approximately the coordinates based on satellite signals received from less than three satellites of the satellite based system (see page 2, paragraph 21).

***Allowable Subject Matter***

4. Claim 44-47, 49-53, 58-60 & 62-66 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NGA X. NGUYEN whose telephone number is (571)272-5217. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TARCZA H. THOMAS can be reached on (571) 272-6979. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NGA X NGUYEN  
Examiner  
Art Unit 3662

NXN

/Thomas H. Tarcza/

Supervisory Patent Examiner, Art Unit 3662